



## Features

- Built-in Web Server for IF-THEN-ELSE rule setting
- Built-in IF-THEN-ELSE rule engine for logic operation
- No more programming. Click and get done!
- Support I/O, Counter, Timer, Email, Recipe operations
- Data logger and data files send back function supported
- Modbus TCP/RTU Protocol for SCADA Software Seamless Integration
- Support XW-Board
- Support Modbus TCP Slave Devices(Up to 7)
- SNTP Time Synchronization Supported



## Introduction

WISE (Web Inside, Smart Engine) is a product series developed by ICP DAS that functions as control units for use in remote logic control and monitoring in various industrial applications. WISE offers a user-friendly and intuitive web site interface that allows users to implement IF-THEN-ELSE control logic on controllers just a few clicks away; no programming is required. With its powerful and easy-to-use features, it will minimize the learning curve, shorten time to market and dramatically reduce the labor and cost spent on system development.

WISE-5800-MTCP supports an I/O expansion bus to implement various I/O functions such as D/I, D/O, A/D and D/A according to the XW-Board. In addition, WISE-5800-MTCP also supports Modbus TCP slave devices. Based on the connection ability with Modbus TCP slave devices, WISE-5800-MTCP can provide user more flexibility in application field.

WISE-5800-MTCP supports Modbus TCP/RTU protocol to make seamless integration with SCADA software available. It includes all advantages which WISE series controllers can provide. In addition, WISE-5800-MTCP provides data logger function with microSD card, it can record I/O channel value by event trigger or regular time period. The data files can be sent back by Email or FTP. All setting can be completed through browser.

## Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment, etc.

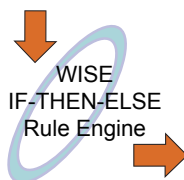
## System Specifications

| System                 |  |
|------------------------|--|
| CPU                    | 16-bit CPU   |
| SRAM                   | 768KB  |
| Flash Memory           | 512KB  |
| EEPROM                 | 16 KB  |
| NVRAM                  | 31 Bytes   |
| microSD Expansion      | Support 1/2/4 GB microSD   |
| RTC (Real Time Clock)  | Provide second, minute, hour, date of week, month and year                                 |
| Watchdog               | Yes  |
| Communication          |  |
| Ethernet               | RJ-45 x 1, 10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X)                               |
| COM 1                  | RS-232 (Tx/D, Rx/D, RTS, CTS, GND), non-isolated, Speed: 115200 bps max.                   |
| COM 2                  | RS-485 (D2+, D2-), self-tuner ASIC inside, non-isolated, Speed: 115200 bps max. (Reserved) |
| LED Indicators         |  |
| System LED             | Yes (Red)  |
| Ethernet Link LED      | Yes (Green: Ethernet link detected, Flashing Green: Ethernet packet received)              |
| Hardware Expansion     |  |
| I/O Expansion Bus      | Yes  |
| Power Requirements     |  |
| Protection             | Power Reverse Polarity Protection  |
| Frame Ground           | Yes (for ESD Protection)   |
| Input Range            | 12 ~ 48 V <sub>DC</sub>  |
| Redundant Power Input  | Yes  |
| Power Consumption      | 2.0 W  |
| Mechanical             |  |
| Dimensions (W x H x D) | 91 mm x 132 mm x 52 mm   |
| Installation           | DIN-Rail   |
| Environmental          |  |
| Operating Temperature  | -25 °C ~ +75 °C  |
| Storage Temperature    | -30 °C ~ +80 °C  |
| Humidity               | 10 ~ 90% RH, non-condensing  |

## Software Specifications

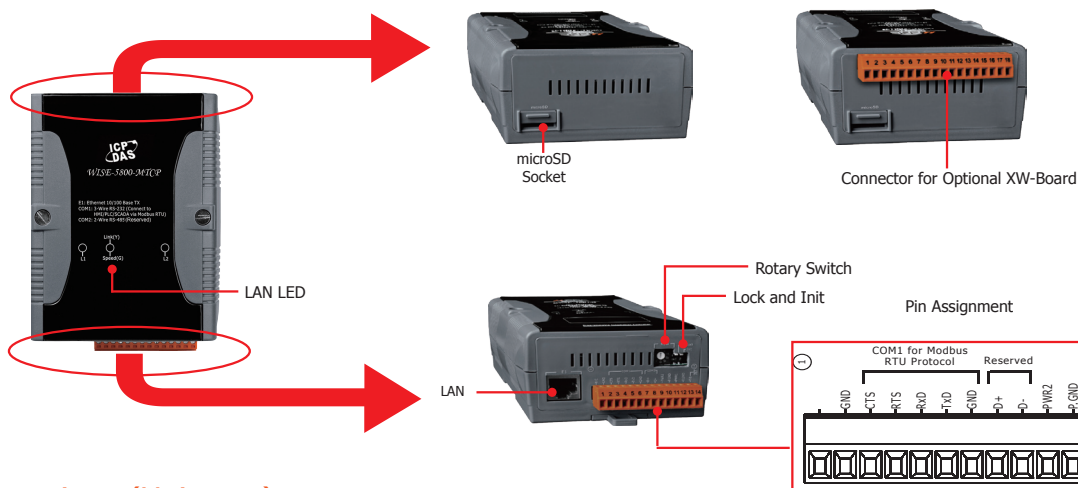
| Functions                   |  |
|-----------------------------|--|
| Rule Configuration Website  | Access Web server on WISE controllers to edit and upload logic rules through web browser.              |
| 36 IF-THEN-ELSE Logic Rules | 3 IF conditions with AND or OR operators<br>3 THEN actions and 3 ELSE actions                          |
| 48 Internal Registers       | Hold temporary variables and read/write data via Modbus/TCP address.                                   |
| 12 Timers                   | Delay / Timing functions.  |
| 12 Schedules                | Setup prescheduled routine tasks.  |
| 12 Emails                   | Send Email messages to pre-set Email receivers.  |
| 12 CGI Commands             | Send pre-set CGI commands.   |
| 12 Recipes                  | Set up THEN/ELSE action groups.  |
| Data Logger                 | Set up the Data Logger configuration, include the data record format, and data file sending operation. |
| Modbus TCP/RTU Protocol     | Real time control and monitoring I/O channels and system status of controllers via SCADA software.     |

| IF Conditions     |                                       |
|-------------------|---------------------------------------|
| DI Channel        | ON, OFF, ON to OFF, OFF to ON, Change |
| AI Channel        |                                       |
| Internal Register | =, >, <, >=, <= (value)               |
| DI Counter        | =, >, <, >=, <= (value), Change       |
| Timer             | Timeout, Not Timeout                  |
| Schedule          | In Range, Out of Range                |
| Rule Status       | Enable, Disable                       |

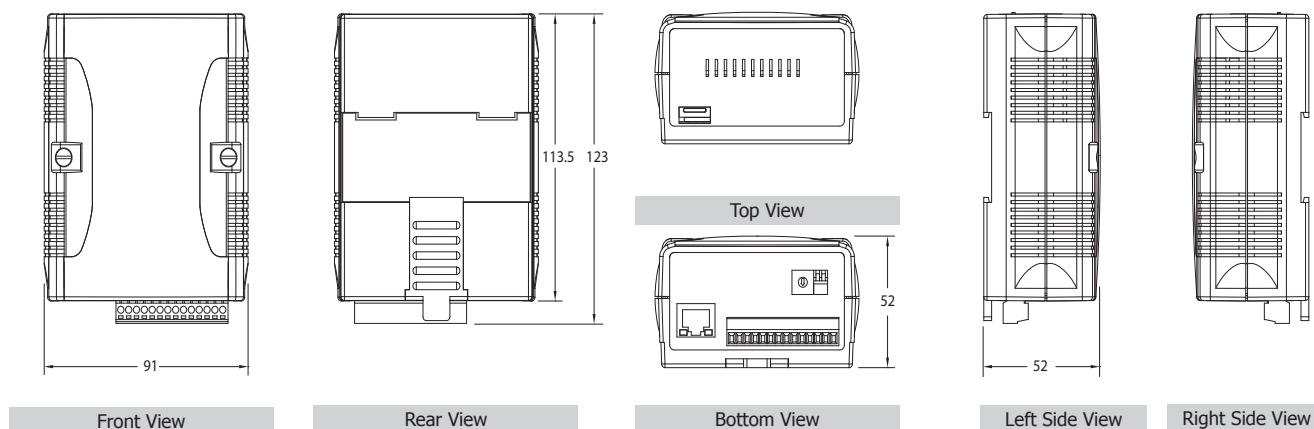


| THEN / ELSE Actions |  |
|---------------------|--|
| DO Channel          | ON, OFF, Pulse Output( apply to XW-Board only) |
| AO Channel          |  |
| Internal Register   | Change the value                               |
| DI Counter          | Reset  |
| Timer               | Start, Reset                                   |
| Schedule            | Enable, Disable                                |
| Email               | Send   |
| CGI Commands        | Send   |
| Recipe              | Execute  |
| Data Logger         | Start, Stop, One-Time Log                      |
| Rule Status         | Enable, Disable                                |

## Appearance



## Dimensions (Unit:mm)



## Ordering Information

|                       |  |
|-----------------------|--|
| <b>WISE-5800-MTCP</b> | User-defined I/O & Data Logger Module for Modbus TCP Devices |
|-----------------------|--|

## Accessories

|                      |  |
|----------------------|--|
| <b>NS-205 CR</b>     | Unmanaged 5-Port Industrial Ethernet Switch (RoHS)         |
| <b>MDR-20-24 CR</b>  | 24V/1A, 24 W Power Supply with DIN-Rail Mounting (RoHS)    |
| <b>DIN-KA52F CR</b>  | 24V/1.04A, 25 W Power Supply with DIN-Rail Mounting (RoHS) |
| <b>3LMSD-4000 CR</b> | 4 GB microSD card (RoHS)                                   |